



# Antidegradation Form 2G

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC)

Wastewater Discharge Authorization Program

555 Cordova Street, AK 99501

907-269-6285

Form 2G must be completed by all applicants. The applicant shall submit sufficient information for the department to complete an antidegradation analysis and make findings under 18 AAC 70.016 (b), (c), and (d). DEC may request additional information as necessary.

Antidegradation analysis is tier-specific and the department findings for Tier 1 and Tier 2 are on a parameter-by-parameter basis. Analysis and department findings for Tier 3 water are on a basis of a designated water.

The antidegradation review procedure is based on:

- The level of protection (i.e. Tier 1, 2, or 3) assigned to the pollutants of concern within the receiving water,
- The type of receiving water,
- Existing water quality of the receiving water,
- The necessity of degradation, and
- The social and economic importance of the regulated activity.

All discharges that require a permit under 18 AAC 83 Alaska Pollutant Discharge Elimination System (APDES) or an application for state certification of a federal permit under Section 401 of the Clean Water Act (CWA) are subject to antidegradation regulatory requirements under 18 AAC 70.016. [\[18 AAC 70.016\(a\)\(1\)\(A & B\)\]](#)

Submit completed form to DEC Division of Water to the address above, or via email to either of the following email addresses depending on the type of permit:

- 401 Certification for 404 CWA, or other federal permits: [DEC-401Cert@alaska.gov](mailto:DEC-401Cert@alaska.gov)
- APDES Permits: [DEC.Water.WQPermit@alaska.gov](mailto:DEC.Water.WQPermit@alaska.gov)
- Or, via other means as coordinated with DEC Division of Water.

## Section 1- Facility Information [\[18 AAC 70.016\(a\)\(5\)\(A – G\)\]](#)

Facility Name: Wally Noerenberg Hatchery Permit Number: \_\_\_\_\_

1. Provide a list of Parameters of Concern in the discharge, the respective concentrations, persistence, and potential impacts to the receiving water.
2. Identify which Tier protection level should apply for each Parameter of Concern.

*(For multiple parameters or if additional space is needed, attach separate sheet)*

Receiving Waterbody or Wetland:

Lake Bay (Marine Waters)

Parameter of Concern:	Respective Concentrations:	Tier* Protection Level: (*Note, complete this entry after completing the rest of the form)
<u>Bacteria, BOD, TSS</u>	<u>200 col/100 mL</u>	<u>2</u>

Persistence:

Long term discharge of bacteria, BOD, TSS

Potential Impacts:

Long term impacts include possible elevated levels of the Parameters of Concern in marine waters around the immediate area of the marine outfall. No other potential impacts are anticipated.

If applicable, data is attached on the parameters that may alter the effects of the discharge to the receiving water.

☐ Yes, ☐ No, ☒ N/A

## Section 2- Baseline Water Quality Provisions [\[18 AAC 70.016\(a\)\(6\)\(A – C\)\]](#)

If determined necessary and requested by the Department, submit sufficient and credible baseline water quality information for the receiving water which meets the requirements of 18 AAC 70.016(a)(6)(A – C).

**Section 3- Tier 1 Protection Level and Analysis** [18 AAC 70.016(b)]

1. Does a discharge of any parameter identified in Section 1 occur to a Category 4 [305(b)] or Category 5 [303(d)] waterbody listed in the current approved Alaska's Integrated Water Quality Monitoring and Assessment Report?  
See <http://dec.alaska.gov/water/water-quality/impaired-waters.aspx> for the most recently approved integrated report and category listings.

☐ Yes ☒ No

- a. If yes, list parameters from Section 1 that are present in the proposed discharge that will be included in the Tier 1 analysis in the following table.

Receiving Water and Wetlands Information (if additional space is needed, attach separate sheet):							
a. Name of waterbodies or wetlands to which you discharge:	Impaired Waters						
	If you answered yes to b, then answer the following three questions (c, d, and e).						
	b. Is the proposed discharge(s) directly to any segment of a Category 4 or 5 waterbody?		c. What parameter(s) are causing the Category 4 or 5 water degradation?	d. Are the parameter(s) causing the degradation present in the proposed discharge?		e. Is the discharge consistent with the assumptions and requirements of applicable EPA approved or established Total Maximum Daily Load (TMDL)?	
	Yes	No		Yes	No	Yes	No
Lake Bay	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Section 4- Tier 2 Protection Level and Analysis** [18 AAC 70.016(c)]

If not identified as requiring only Tier 1 level of protection, Tier 2 is presumed for all water as the default protection level for all parameters [18 AAC 70.016(c)(1)].

1. Is the application for a (Check all that apply):

☒ New Discharge\*

☐ Existing Discharge

☐ Expanded Discharge\*

\*Note: "new or expanded," with respect to discharges means discharges that are regulated for the first time or discharges that are expanded such that they could result in an increase in permitted parameter load or concentration or other changes in discharge characteristics that could lower water quality or have other adverse environmental impacts.

2. Does a discharge of any parameter identified in Section 1 – Facility Information require Tier 2 analysis as defined under 18 AAC 70.016(c)(2)(A) – (E)?

☒ Yes, proceed to **Question 3**

☐ No, please **explain below** and proceed to **Section 5**

3. For each parameter requiring a Tier 2 analysis, provide a description per discharge (e.g., parameter specific per outfall) and analysis of a range of practicable alternatives that have the potential to prevent or lessen the degradation associated with the proposed discharge [18 AAC 70.016(c)(4)] (*if additional space is needed, attach separate sheet*). Include:

- A. Identification of receiving water quality and accompanying environmental impacts on the receiving water for each of the practicable alternatives;

There were only 2 practical alternatives that potentially increase water quality and reduced environmental impacts on the receiving waters:

1) Drainfield dispersal in lieu of surface water discharge - This alternative would have removed any surface water discharge thus maintaining the water quality of the "receiving" waters. This alternative was pursued but found to not be feasible due to inadequate soils at the site.

2) Chlorine disinfection in lieu of UV disinfection - This alternative would have consisted of installing a chlorine tablet feeder with a dechlorinator before discharge to marine waters.

B. Evaluation of the cost for each of the practicable alternatives, relative to the degree of water quality degradation;

1) The estimated cost of this alternative is approximately \$750,000; however, cost was not the deciding factor. This alternative was not feasible due to soil conditions. The cost would have been much greater than the proposed due to the site work and importation of aggregate, but the water quality of the "receiving" waters would not have been impacted.

2) The estimated cost of this alternative is approximately \$500,000; however, cost was not the deciding factor. UV disinfection has been proven to be an effective method for killing bacteria. Chlorine disinfection is a more traditional way that is also effective. This method was not chosen due to the possibility of residual chlorine escapement which would result in further water quality degradation and additional environmental impacts.

C. Identification of a proposed practicable alternative that prevents or lessens water quality degradation while also considering accompanying cross-media environmental impacts. *(If the applicant has selected a non-degrading alternative, the social or economic importance analysis in Question 4 is not required.)*

Considering the 2 alternatives listed above, we cannot identify an alternative that prevents or lessens water quality degradation. The design proposes methods and means for reduction of all the proposed contaminants including UV disinfection, trickling filters, aeration, primary treatment, etc.

#### 4. Social or Economic Importance [\[18 AAC 70.016\(c\)\(5\)\]](#)

Provide information that demonstrates the accommodation of important social or economic development. The applicant shall complete either a social OR economic importance analysis (or both) identifying each affected community in the area where the receiving water for the proposed discharge is located. *(if additional space is needed, attach separate sheet)*

##### (A) Social Importance Analysis:

*(select one or more areas, and describe below)*

- ☐ community services provided;
- ☐ public health or safety improvements;
- ☐ infrastructure improvements;
- ☐ education and training;
- ☐ cultural amenities;
- ☐ recreational opportunities

##### (B) Economic Importance Analysis:

*(select one or more areas, and describe below):*

- ☒ employment, job availability, and salary impacts;
- ☐ tax base impacts;
- ☐ expanded leases and royalties;
- ☒ commercial activities;
- ☒ access to resources;
- ☐ access to a transportation network

**Describe** (checked items above or attach as separate document)

This discharge will be produced by a new domestic wastewater treatment system to allow for hatchery operations. This hatchery contributes significantly to the abundance of area salmon stocks which are essential for sustaining the commercial fishing fleets, local subsistence, and tourism. Salmon provide an immeasurable economic resource for Alaska. Additionally, the hatchery employs 25 to 30 onsite staff. If the discharge proposed were not allowed to occur, the hatchery would not be able to resume operations. Thus, the economic impact would be devastating.

#### Section 5- Tier 3 Protection Level and Analysis [\[18 AAC 70.016\(d\)\]](#)

1. Is the discharge to a designated Tier 3 water? ☐ Yes ☒ No

*(Currently, the State of Alaska has not designated any Tier 3 waters).*

See <http://dec.alaska.gov/water/water-quality/standards/antidegradation.aspx> for Tier 3 for further information.)

**Section 6. Certification Information**

An Alaska Pollutant Discharge Elimination System (APDES) permit application must be signed by an individual with the appropriate authority per [18 AAC 83.385](#) or for 401 certification of 404 permits or other federal permits per [18 AAC 15.030](#).

**APDES Permits**

Corporate Executive Officer <a href="#">18 AAC 83.385</a> (a)(1)(A)	For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation.
Corporate Operations Manager <a href="#">18 AAC 83.385</a> (a)(1)(B)	For a corporation, the manager of one or more manufacturing, production, or operating facilities, if (i) the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations; (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
Sole Proprietor or General Partner <a href="#">18 AAC 83.385</a> (a)(2)	For a partnership or sole proprietorship, the general partner or the proprietor respectively.
Public Agency, Chief Executive Officer <a href="#">18 AAC 83.385</a> (a)(3)(A)	For a municipality, state, or other public agency, the chief executive officer of the agency.
Public Agency, Senior Executive Officer <a href="#">18 AAC 83.385</a> (a)(3)(B)	For a municipality, state, or other public agency, a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

**401 Certifications**

Corporations <a href="#">18 AAC 15.030</a> (1)	In the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation.
Partnerships <a href="#">18 AAC 15.030</a> (2)	in the case of a partnership, by a general partner
Proprietorship <a href="#">18 AAC 15.030</a> (3)	in the case of a sole proprietorship, by the proprietor
Public Agency <a href="#">18 AAC 15.030</a> (4)	in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Organization:	Name:	Title:	
Prince William Sound Aquaculture Corp.	Geoff Clark	General Manager	
Phone:	Fax (optional):	Email:	
907-632-4368		geoff.clark@pwsac.com	
Mailing Address:	Street (PO Box):		
	500 First Street		
	City:	State:	Zip:
	Cordova	Alaska	99574



Signature/Responsible Official

08/27/21

Date

**Section 7. Form 2G Preparer** (Complete if Form 2G was prepared by someone other than the certifier.)

Organization:	Name:	Title:	
R&M Engineering-Ketchikan	Joel Teune	Design Engineer	
Phone:	Fax (optional):	Email:	
907-225-7917		jteune@rmketchikan.com	
Mailing Address:	Street (PO Box):		
<input type="checkbox"/> Check if same as Certifiers Information	7180 Revilla Road Suite 300		
	City:	State:	Zip:
	Ketchikan	Alaska	99901